

constructed and arranged to selectively activate the at least one light emitting diode light source to create at least one warning light signal, the controller constructed and arranged to provide variable illumination intensity to each of the at least one support, the at least one module and the at least one light emitting diode light source wherein the variable illumination intensity provides the at least one warning light signal with non-constant luminosity.

### REMARKS

In the Office Action of November 27, 2001, claims 1-20 were rejected under 35 U.S.C. §103(a) as being obvious over US 5,410,328 to Yoksza et al. (Yoksza) in view of US 5,661,645 to Hochstein. However, the proposed combination of Yoksza and Hochstein fails to teach, suggest, or motivate the provision of all of the elements identified in the instant claims. Neither Yoksza or Hochstein teach, suggest, or motivate the provision of a warning signal light system having a controller constructed and arranged to provide variable illumination intensity to each of the at least one support, the at least one module and the at least one light emitting diode light source where a non-constant illumination intensity is provided to the LED light sources.

In the Office Action, Yoksza is said to show a modular light system and Hochstein is alleged to show a dimming command which is asserted to be analogous to "variable illumination intensity". The Yoksza '328 reference may not be combined to the Hochstein '645 reference to teach Applicant's invention herein.

Initially, with respect to 35 U.S.C. §103, the Federal Circuit has set out at least five principles regarding obviousness determinations under §103. *Hodosh v. Block Drug Co.*, 786 F.2d 1136, 229 USPQ 182, 187 (Fed. Cir. 1986). In *Hodosh*, the Federal Circuit stated:

Our comments on the district court's obviousness determination generally include the following tenets of patent law that must be adhered to when applying §103:

- (1) the claimed invention must be considered as a whole (35 U.S.C. 103; see, e.g., *Jones v. Hardy*, 727 F.2d 1524, 1529, 220 USPQ 1021, 1024 (Fed. Cir. 1984) (though the difference between claimed invention and prior art may seem slight, it may also have been the key to advancement of the art));

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- (2) the references must be considered as a whole and suggest the desirability and thus the obviousness of making the combination (see, e.g., *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481 488 (Fed. Cir. 1984));
- (3) the references must be viewed without the benefit of hindsight vision afforded by the claimed invention (e.g., *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983));
- (4) "ought to be tried" is not the standard with which obviousness is determined (*Jones, supra*, 727 F.2d at 1530, 220 USPQ at 1026); and
- (5) the presumption of validity remains constant and intact throughout litigation (35 U.S.C. 285; e.g., *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359-60, 220 USPQ 763, 770 (Fed. Cir. 1984)).

Furthermore, when an attempt is made to combine two references A and B, or to change a single reference, a prima facie case of obviousness has not been established if:

- (1) A and B could not or would not be physically combined in an operative fashion to produce the desired result by a person of ordinary skill without use of the patentee's teachings. *In re Lintner*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972); *In re Regel*, 526 F.2d 1399, 199 USPQ 136 (CCPA 1975); *In re Jansson*, 609 F.2d 996, 203 USPQ 976 (CCPA 1979).
- (2) The intended purpose or function of either A or B, or both, is destroyed by their combination. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).
- (3) No suggestion why or reasons or motivation for combining A and B appears explicitly or implicitly in either A or B, or both in combination. *In re Clinton*, 527 F.2d 1226, 188 USPQ 265 (CCPA 1976). Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absent a teaching or suggestion supporting the combination. *In re Fine*, 5 USPQ 2d, 1596 (1988) (Fed. Cir. 1989); see also *In re Laskowski*, 10 USPQ 2d 1397 (Fed. Cir. 1989).
- (4) A and B are from such diverse arts (i.e., either or both are nonanalogous art to the claimed invention) that a person of ordinary skill in the claimed art would not look to those arts to solve the problem treated by the claimed invention. *In re Pagliaro*, 657 F.2d 1219, 210 USPQ 888 (CCPA 1981); *In re Wood*, 599 F.2d 1032, 202 USPQ 171 (CCPA 1979); *In re Horn*, 203 USPQ 969 (CCPA

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1979).

(5) A and B do not teach the source of the problem and the recognition of the source of the problem is what is unobvious. *Eibel Process Co. v. Minnesota and Ontario Paper Co.*, 261 US 45 (1923); *In re Sponnoble*, 405 F.2d 578, 160 USPQ 237 (CCPA 1969); *In re Peehs*, 612 F.2d 1287, 204 USPQ 835 (CCPA 1980). See *Kayton*, 1 Patent Practice 5-28, 29 (1985).

In the case of *In re Dembiczak*, 50 U.S.P.Q.2d 1614 (CAFC 1999), the Court of Appeals for the Federal Circuit has stated that the ultimate determination of whether an invention is or is not obvious is a legal conclusion based upon underlying factual inquiries including:

- (1) The scope and content of the prior art;
- (2) The level of ordinary skill in the prior art;
- (3) The differences between the claimed invention and the prior art; and
- (4) Objective evidence of non-obviousness.

The Court of Appeals for the Federal Circuit went on to state that the analysis with respect to obviousness is required to be conducted "at the time the invention was made" to guard against entry into the "tempting but forbidden zone of hindsight". The Court of Appeals for the Federal Circuit went on to state that the "very ease with which the invention can be understood may prompt one to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher". The Court of Appeals for the Federal Circuit has stated that the case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references and that one of ordinary skill in the art would have been motivated to select the references and combine them, and it was error to not elucidate any factual teachings, suggestions, or incentives from the prior that showed the propriety of combination. The Federal Circuit in *Dembiczak* further stated that combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability which is the essence of hindsight.

Applicant respectfully traverses the Examiner's analysis of the Hochstein '645

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reference herein. The purpose of the Hochstein '645 reference is to regulate voltage and to provide a rechargeable battery back-up for a traffic light which may include LED light sources.

The purpose of the Hochstein '645 reference is provided in column 6, beginning with lines 17-27 which state:

Another function of the present invention is to use the inherent pulse modulating nature of the switch mode power supply to provide voltage regulation to the LED Array signal 12. Instead of using dissipative (heat producing) linear regulators for either voltage or current (to accomodate line voltage variations), the power factor and distortion controlling switch mode power supply 10 is used as an efficient voltage regulator. **That is, the LED array 12, consisting of a large number of series-parallel connected LED devices 14, can be kept at essentially constant luminosity over a substantial range of input voltages.**

The invention of Hochstein '645 is to provide essentially constant luminosity by voltage regulation.

Applicant respectfully traverses the Examiner's assertion that the Hochstein '645 reference to "dimming" is analogous to "variable illumination intensity". The Hochstein '645 reference at column 10, lines 37-43 state:

Many existing incandescent lamp traffic signals are dimmed at night to reduce glare and, of course, power consumption. LED signals can be dimmed by reducing the average current through the LED array. A problem arises however because existing traffic signal controllers dim incandescent signals by providing half-wave rectified A.C. to the devices.

The Hochstein '645 reference only discloses a first essentially constant daylight luminosity level and a second essentially constant night luminosity level for a traffic light which is reduced in intensity as compared to the first essentially daylight luminosity level.

The Hochstein '645 reference teaches the use of power factor correction converters and/or rectifiers to provide voltage regulation to an LED array for the provision of one of two essentially constant luminosity levels.

The Hochstein '645 reference does not teach the use of a controller to regulate

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luminosity for the provision of non-constant and/or variable luminosity or illumination intensity. The teachings of the Hochstein '645 reference add nothing, and are not applicable to, Applicant's teachings herein as related to the non-constant variable luminosity or illumination intensity within a warning light signal.

Further, Yoksza '328 may not be combined with Hochstein '645 in an operative fashion to produce the desired result without the use of Applicant's teachings herein. Specifically, the intended purpose of Hochstein '645 would be destroyed in that Hochstein '645 requires and teaches voltage regulation, rectification, and/or conversion to provide an essentially constant light signal. The purpose of voltage regulation, rectification, and/or conversion to provide an essentially constant light signal is opposite to, and would be destroyed by, teaching of a non-constant variable luminosity and/or light intensity within a warning light signal. The Hochstein '645 reference does not teach the source and/or the solution to the problem of non-constant variable luminosity and/or light intensity within a warning light signal.

Yoksza, Hochstein, and Yoksza in combination with Hochstein fail to suggest, motivate, disclose or teach the utilization of a controller in electrical communication with the at least one LED, at least one module, and at least on support, where the controller provides variable illumination intensity to each of the at least one LED, at least one module, and at least one support where a non-constant illumination intensity is provided to the LED light source.

In addition to the above, Applicant respectfully asserts that only when the present case is viewed through the lens of hindsight is motivation found to combine the cited references in the manner proposed in the Office Action. Such use of hindsight in establishing a §103 rejection is impermissible.

In the present case, the Yoksza '328 reference is directed to replacement modules for large-scale LED displays. There is nothing in Yoksza '328 which suggests a need or desire to provide the support, the modules, or the LEDs themselves with non-constant variable illumination intensity. Hochstein '645 is likewise silent as to the use of a controller to provide non-constant variable illumination intensity to any portion of the marker light using a controller.

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Because neither reference teaches, motivates, or suggests the use of a controller to provide non-constant variable illumination intensity to each of the at least one support, the at least one module, and the at least one LED, without the use of hindsight provided by the present application, Applicant's claims herein are not obvious in view of the prior art.

The amendments to the claims contain no new matter.

**FORMALITIES**


If an extension of time is required to make this response timely and no separate petition is enclosed, Applicant hereby petitions for an extension of time sufficient to make the response timely. In the event that this response requires the payment of government fees and payment is not enclosed, please charge Deposit Account No. 22-0350.

**CONCLUSION**

In view of the foregoing it is believed that the present application, with claims 1-20 are in condition for allowance. Early action to that effect is earnestly solicited. Applicant herein has enclosed a marked-up version of the claims for consideration by the Examiner.

Respectfully submitted,  
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**MARKED COPY OF THE AMENDED CLAIMS**

1. (Twice Amended) A modular warning signal light system comprising:

at least one support, the at least one support having at least one module receiving port;

at least one module, the at least one module having at least one visible side, the at least one visible side having at least one light emitting diode light source engaged thereto, the at least one module having at least one support engagement member, the at least one support engagement member constructed and arranged to be removably received by the at least one module receiving port, the at least one module and the at least one light emitting diode light source in electric communication with one another and with the at least one support; and

a controller, the controller in electric communication with the at least one support, the at least one module and the at least one light emitting diode light source, the controller constructed and arranged to selectively activate the at least one light emitting diode light source to create at least one warning light signal, the controller constructed and arranged to provide variable illumination intensity to each of the at least one support, the at least one module and the at least one light emitting diode light source wherein the variable illumination intensity provides the at least one warning light signal with non-constant luminosity.

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